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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/726,020	11/30/2000	Naoto Abe	862.C1881	1315

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EXAMINER

LEE, WILSON

ART UNIT PAPER NUMBER

2821

DATE MAILED: 10/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/726,020

Applicant(s)

ABE ET AL.

Examiner

Wilson Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 is/are allowed.
- 6) ☒ Claim(s) 10-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections – 35 U.S.C. 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 11, line 2, “the conductive is connected to only one of the wiring lines” contradicts claim 10, since claim 10 clearly discloses the conductive member is in contact with at least some wiring lines, the wiring line contacted with conductive member cannot be limited to only one. Further, “the wiring line” is vague whether it refers to column wiring line or row wiring line.

Regarding Claim 15, line 2, “the wiring line” is vague whether it refers to column wiring line or row wiring line.

Claim Rejections – 35 U.S.C. 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 10, 12-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Dodabalapur et al. (6,384,804).

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Regarding Claim 10, Dodabalapur discloses an apparatus comprising:

- a plurality of row-direction wiring lines (ROW and ROWB);
- a plurality of column-direction wiring lines (COL and COLB);
- a plurality of devices (P1-P5), wherein each one of the plurality of devices is connected to at least one of the plurality of row-direction wiring lines (ROW and ROWB) and at least one of the plurality of column-direction wiring lines (COL and COLB);
- a conductive member (LED), wherein the conductive member is in contact with at least some wiring lines among the plurality of row-direction wiring lines and the plurality of column-direction wiring lines; and
- a controlled current application circuit (current source control), for applying a predetermined controlled current to the plurality of column-direction wiring lines (COL and COLB) (See Col. 4, lines 51-54).

Regarding Claim 12, Dodabalapur discloses that the conductive member is arranged to influence a resistance value (resistance of the LED shown in figure 7) of an electrical path extending from the controlled current application circuit.

Regarding Claim 13, Dodabalapur discloses an apparatus comprising:

- a plurality of row-direction wiring lines (ROW and ROWB);
- a plurality of column-direction wiring lines (COL and COLB);
- a plurality of devices (P1-P5), wherein each one of the plurality of devices is connected to at least one of the plurality of row-direction wiring lines (ROW

and ROWB) and at least one of the plurality of column-direction wiring lines (COL and COLB);

- a controlled current application circuit (current source), for applying a predetermined controlled current to the plurality of column-direction wiring lines (COL and COLB) (See Col. 4, lines 51-54); and
- a conductive member (LED) arranged to induce different influences on resistance values of a plurality of electrical paths (from P1 to P4, from P4 to P3, from P3 to COL, from COL to current source) from the controlled current application circuit by the plurality of column-direction wiring lines (COL and COLB) (e.g. resistance of LED change the resistances of all the paths connected from LED to the current source) (See Figure 7).

Regarding Claim 14, Dodabalapur discloses that the conductive member (LED) is arranged on at least on wiring line among the plurality of row-direction wiring lines (ROW and ROWB) and the plurality of column-direction wiring lines (COL and COLB).

Regarding Claim 15, Dodabalapur discloses that the conductive member is electrically connected to the Column or Row wiring line (COL or ROW) (See Figure 7).

Allowable subject matter

Claims 1-9 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art neither discloses nor suggests a spacer or spacers for maintaining an interval between the electron source and the counter substrate is/are arranged on or different positions on or electrically connected to some of the row-direction wiring lines

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among the plurality of row-direction wiring lines, comprising a circuit for sequentially turning on the plurality of row-direction wiring lines; and a controlled current application circuit for applying a predetermined controlled current to the plurality of column-direction wiring lines as required in claims 1-4.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakajima (6,426,782) discloses a very similar invention but fails to disclose the claimed structure such as the counter substrate arranged to face electron source, insulating layers between row-direction wiring lines and column-direction wiring lines spacers between the electron source and counter substrate. Todokora et al. (6,339,414) discloses a very similar invention but fails to disclose the spacer structure as claimed.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Wilson Lee whose telephone number is (703) 306-3426.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0956.

Papers related to Technology Center 2800 applications may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The Technology Center Fax number is (703) 308-7722 or (703) 308-7724.


Patent Examiner
Patent and Trademark Office

WL

9/29/03